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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/177,572	10/23/1998	YOSHIHIRO TERASHIMA	35.C13035	3325

5514 7590 06/25/2004

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EXAMINER

NGUYEN, KEVIN M

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/177,572

Applicant(s)

TERASHIMA ET AL.

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/21/2004 has been entered. An action on the RCE follows:

Drawings

2. The drawing was received on 05/21/2004. This drawing is acknowledged and approved.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwata et al (US 5,900,857) in view of Iwasaki (US 4,745,485).

5. As to claim 17, Kuwata et al teach a memory controller comprising
a writing FIFO 2 (a first FIFO section, fig. 1) storing the image data of "a" x "2n"-
bit width, where "a" is a size of the inputted bit width, "n" is a positive integer number,

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and 2 x "n" makes an even bit (see column 13, lines 64-67, column 16, lines 66-67, column 19, lines 56-59, and column 21, lines 40-44);

a DRAM 3 (a frame memory section, fig 1), a reading FIFO 5 (a second FIFO section, fig. 1);

the timing control section 9 controls the image data RGB (6) is read out from the first FIFO section 2, and read out from the frame memory section 3 which the image data RGB (6) is inputted into the first FIFO section 2, the memory control section 4 controls writing into the frame memory section 3 (see figure 1, column 11, lines 44-67);

said first FIFO section is of a size suitable for storing image data so that, within a period for inputting the image data in said first FIFO section to FULL capacity (column 13, lines 65-67);

Kuwata et al fail to teach a serial/parallel conversion.

However, Iwasaki teaches a related memory controller which includes a serial/parallel conversion 2 (see figure 1).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute the serial/parallel conversion (2) taught by Iwasaki for Kuwata's frame modulation dither circuit (1) because this would provide a picture display device capable of displaying a picture with good quality using the frame memories for one frame as taught by Iwasaki (col. 1, lines 48-50).

6. As to claim 18, Iwasaki teach a liquid crystal panel 10, a decoder 31, and the memory controller 18 (see figure 7).

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Response to Arguments

7. Applicant's arguments filed 5/21/2004 have been fully considered but they are not persuasive.

8. In response to applicant's argument that claim 17 recites "the image data is read out from said first FIFO section, and read out from said frame memory section at a rate that is half of a rate at which the image data is inputted into said first FIFO section". This argument is not persuasive because Iwasaki's invention teaches the picture signal is applied to the driver 9 at a speed equal to 1/2 of the writing speed to the frame memories 4 and 5 (column 9, lines 54-56).

For these reasons, the rejections based on Kuwata et al and Iwasaki have been maintained.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

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(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KN
June 16, 2004

XIAO WU
PRIMARY EXAMINER